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Assignee Hewlett-Packard Development Company, L.P.
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Examiner..... U. Khan
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Title:**ADAPTIVELY READING ONE OR MORE BUT FEWER THAN ALL PIXELS OF
IMAGE SENSOR**

BRIEF OF APPELLANT UNDER 37 CFR 41.37

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Appellant appeals from the final rejection mailed July 1, 2009 of claims 1-28.
This Appeal Brief is pursuant to 37 CFR 41.37. The Commissioner is authorized to
charge the fee required under 37 C.F.R. § 41.20(b)(2) to Deposit Account No. 08-
2025.

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I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

Appellant's undersigned legal representative and the assignee of the pending application are aware of no appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 1-28 are pending and claims 1-28 stand finally rejected. The Appellant appeals the rejections of claims 1-28.

IV. STATUS OF AMENDMENTS

An amendment under 37 CFR 1.116 was filed on August 20, 2009, but not entered by the Examiner in an Advisory Action dated August 27, 2009. Thus, all amendments, except the amendment under 37 CFR 1.116 that was filed on August 20, 2009, have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

Referring to independent claim 1:

1. A method of selectively reading less than all information available at an output of an image sensor (FIG. 1, element 102; paragraph [0020]) for which member-pixels of a subset of an entire set of pixels are individually addressable, the method comprising:

sampling information, at the output of the image sensor, representing a targeted member-pixel of the subset without having to read information representing the entire set of pixels (FIG. 5, element 506; paragraph [0045]);

selectively reading information, at the output of the image sensor, representing at least one or more, but fewer than all member pixels, of the entire set based upon the sampling information without having to read information representing all pixels on the image sensor, wherein each pixel can be individually read, independently of other pixels (FIG. 1, element 106; paragraph [0036]);

accessing a first set of sampling photo-sensing pixels of the image sensor and accessing a second set of non-sampling pixels of the image sensor, wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively (FIG. 2, elements 202 and 204; paragraph [0026]);

organizing the entire set of pixels into dynamic and static partitions, each partition having multiple pixels (FIG. 1, element 106; paragraph [0047]);

mapping one or more of the partitions to one or more of the member-pixels of the subset, respectively (FIG. 4, element 414; paragraph [0039]); and

reading the static partitions once and the dynamic partitions multiple times and processing extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions (FIG. 1, element 106 paragraph [0047]).

Referring to independent claim 13:

13. A method of selectively reading data available at an output of an image sensor, the method comprising:

reading less than all data available at the output of the image sensor for which selected ones but not all of the entire set of pixels are individually addressable, wherein each pixel can be individually read, independently of other pixels (FIG. 1, element 106; paragraph [0036]);

accessing a first set of sampling photo-sensing pixels of the image sensor and accessing a second set of non-sampling pixels of the image sensor, wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively (FIG. 2, elements 202 and 204; paragraph [0026]);

organizing the entire set of pixels into dynamic and static partitions, each partition having multiple pixels (FIG. 1, element 106; paragraph [0047]);

mapping one or more of the partitions one or more of the member-pixels of the subset, respectively (FIG. 4, element 414; paragraph [0039]); and

reading the static partitions once and the dynamic partitions multiple times and processing extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions (FIG. 1, element 106 paragraph [0047]).

Referring to independent claim 24:

24. A digital camera comprising:

a pixel-differentiated image sensor for which member-pixels of a subset of the entire set of pixels are individually addressable, the image sensor being controllable to read less than all of the pixels without having to read all of the pixels (FIG. 1, element 106; paragraph [0036]);

a processor operable to

obtain sampling information from a targeted member-pixel of the subset without having to read information from the entire set of pixels (FIG. 5, element 506; paragraph [0045]); and

selectively obtain information from another one or more but fewer than all member pixels of the entire set based upon the sampling information without having to read all of the pixels on the image sensor, wherein each pixel can be individually read, independently of other pixels (FIG. 1, element 106; paragraph [0036]);

organize the entire set of pixels into dynamic and static partitions, each partition having multiple pixels (FIG. 1, element 106 paragraph [0047]);

map one or more of the one or more of the member-pixels of the subset, respectively (FIG. 4, element 414; paragraph [0039]); and

read the static partitions once and the dynamic partitions multiple times and process extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions (FIG. 1, element 106; paragraph [0047]);

a first set of sampling photo-sensing pixels of the image sensor (FIG. 2, elements 202 and 204; paragraph [0026]); and

a second set of non-sampling pixels of the image sensor (FIG. 2, elements 202 and 204; paragraph [0026]);

wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively (FIG. 2, elements 202 and 204; paragraph [0026]).

Referring to independent claim 27:

27. A digital camera comprising:

a pixel-differentiated image sensor for which selected ones of the entire set of pixels are individually addressable, the image sensor being organized into a matrix of partitions, each partition including a member-pixel of the subset referred to as a sampling pixel (FIG. 1, element 106 paragraph [0020]); and

a processor operable to

obtain sampling data from a sampling pixel without having to obtain information from the other pixels in the corresponding partition (FIG. 5, element 506; paragraph [0045]), and

selectively obtain data from at least the entire corresponding partition but fewer than all of the partitions depending upon the sampled-data without having to obtain information from all of the pixels on the image sensor, wherein each pixel can be individually read, independently of other pixels (FIG. 1, element 106; paragraph [0036]);

access a first set of sampling photo-sensing pixels of the image sensor and access a second set of non-sampling pixels of the image sensor, wherein the first and the second set of pixels have different physical circuitry addressing and control lines going to them, respectively (FIG. 2, elements 202 and 204; paragraph [0026]); and

organize the entire set of pixels into dynamic and static partitions, each partition having multiple pixels (FIG. 1, element 106; paragraph [0047]);

map one or more of the partitions one or more of the member-pixels of the subset, respectively (FIG. 4, element 414; paragraph [0039]); and

read the static partitions once and the dynamic partitions multiple times and process extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions (FIG. 1, element 106; paragraph [0047]).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. The Office Action rejected claims 1-2, 12-13, 24-25 and 27-28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. (U.S. Patent No. 2003/193593) in view of Vernier (U.S. Patent Publication No. 2004/0036778).

B. The Office Action rejected claims 3-9, 14-20, 23 and 26 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier and further in view of Yoneyama (JP 04313949).

C. The Office Action rejected claims 10-11 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier and further in view of Horie et al. (U.S. Patent No. 6,480,624).

D. The Office Action rejected claims 21-22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier in view of Yoneyama and further in view of Horie et al.

VII. ARGUMENTS

A. The rejection of claims 1-2, 12-13, 24-25 and 27-28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. (U.S. Patent No. 2003/193593) in view of Vernier (U.S. Patent Publication No. 2004/0036778) should be withdrawn because claims 1-2, 12-13, 24-25 and 27-28 contain features that are not disclosed, taught or suggested by the cited references.

According to case law and the MPEP, all of the claimed elements of an Appellant's invention **must be considered**. (*In re Kotzab*, 55 USPQ 2d 1313, 1318 (Fed. Cir. 2000). *MPEP* 2143.) [*emphasis added*]. If **one** of the elements of the Appellant's invention is missing from or not taught in the cited references and the Appellant's invention has advantages not appreciated by the cited references, then no prima facie case of obviousness exists. (*MPEP* 2143.03). The Federal Circuit Court has stated that it was error not to distinguish claims over a combination of prior art references where a material limitation in the claimed system and its purpose was not taught therein. *In Re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

The cited references, alone or in combination, do not disclose, teach, or suggest all of the features of the Appellants' claimed invention.

Specifically, the Appellants' independent claims include at least organizing the **entire set of pixels** into dynamic and static partitions, each respective partition having multiple pixels, mapping one or more of the dynamic and the static partitions to one or more of the member-pixels of the subset, respectively. Moreover, the Appellants' independent claims include reading the static partitions **once** and the dynamic partitions **multiple times** and processing extra partition-read requests for creating a series of images corresponding in time to more **frequently read partitions**.

In contrast, clearly, Lee et al. in combination with Vernier do **not** disclose, teach or suggest at least the above argued features of the Appellants' claimed invention. Instead, Lee et al. simply disclose using X-Y addressable active pixel sensors, while Vernier merely disclose a slit camera with user defined scan lines (see Abstract of Vernier). Although Vernier discloses selected pixels being stored in a static portion of an image buffer and remaining pixels of the frame being stored in a dynamic portion of the image buffer, this is very different from the Applicants' independent claims.

For example, the independent claims include organizing the **entire set of pixels** into dynamic and static partitions, unlike Vernier, which uses selected pixels. Also, the independent claims include reading the static partitions **once** and the dynamic partitions **multiple times**, while Vernier does not specify different read frequencies of the static. Moreover, the independent claims include processing extra partition-read requests for creating a series of images corresponding in time to more **frequently read partitions** and dynamic partitions, unlike Vernier, where the static and dynamic portions are related to scan lines for preventing overwriting issues.

Consequently, **unlike** the Applicants' independent claims, in Vernier, the selected pixels relate to a current position of the scan line and the static and dynamic portions relate to pixels of scan lines of moving objects for preventing overwriting of any pixels of the static portion to display a distorted image of the moving object (see FIGS. 3-5 and Abstract of Vernier).

Further, among other reasons, the rejections of the independent claims under 35 U.S.C. § 103(a) should be withdrawn because the Examiner used impermissible hindsight when the claims were rejected. It is well-settled law that the Examiner must have a reasonable basis for his conclusions. Namely, the Examiner cannot broadly mischaracterize the references and/or the Appellant's specification and/or claims and then use hindsight to arbitrarily assert an element in the reference is similar to an element in the claim to support his rejection, which is the case here. *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992). The Examiner is reminded that according to *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971) the Examiner's obviousness rejection is only proper if it "**does not include knowledge gleaned only from the Appellant's disclosure...**" [emphasis added]. The Examiner **clearly included knowledge gleaned only from the Appellant's disclosure** when he rejected claims for obviousness.

Moreover, "[T]he genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some 'teaching, suggestion or reason' to combine cited references." *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579, 42 USPQ 2d 1378, 1383 (Fed. Cir. 1997). When the reference in question seems relatively similar "**...the opportunity to judge by hindsight is particularly tempting**. Consequently, the tests of whether to combine references need to be

applied rigorously," especially when the Examiner ignores a teaching away, which is the case here. *McGinley v. Franklin Sports Inc.*, 60 USPQ 2d 1001, 1008 (Fed. Cir. 2001). [*emphasis added*]. Since the Examiner's rejection is unquestionably based on hindsight, the rejection is improper and must be withdrawn. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*

Therefore, because Lee et al. in combination with Vernier do **not** disclose, teach or suggest all of the features of the Applicants' independent claims, Lee et al. in combination with Vernier cannot render the claims obvious.

B. The rejection of claims 3-9, 14-20, 23 and 26 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier and further in view of Yoneyama (JP 04313949) should be withdrawn because claims 1-2, 12-13, 24-25 and 27-28 contain features that are not disclosed, taught or suggested by the cited references.

On page 12 of the July 1, 2009 final Office Action, the Examiner rejected claims 3-9, 14-20, 23 and 26.

As argued above, Lee et al. in combination with Vernier do **not** disclose, teach or suggest the Appellants' claimed at least organizing the **entire set of pixels** into dynamic and static partitions, each respective partition having multiple pixels, mapping one or more of the dynamic and the static partitions to one or more of the member-pixels of the subset, respectively and reading the static partitions **once** and the dynamic partitions **multiple times** and processing extra partition-read requests for creating a series of images corresponding in time to more **frequently read partitions**. Further, when Yoneyama is combined with Lee et al. and Vernier, the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention.

For instance, Yoneyama merely disclose V_A , V_B and V_C of picture elements A, B and C (the Examiner related this to organizing the entire set of pixels and mapping the partitions). Consequently, Yoneyama fails to cure the deficiencies of Lee et al. and Vernier as argued above. Thus, since the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention, this obviousness rejection of claims must be withdrawn.

C. The rejection of claims 10-11 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier and further in view of Horie et al. (U.S. Patent No. 6,480,624) should be withdrawn because claims 10-11 contain features that are not disclosed, taught or suggested by the cited references.

On page 21 of the July 1, 2009 final Office Action, the Examiner rejected claims 10-11.

As argued above, Lee et al. in combination with Vernier do not disclose, teach or suggest the Appellants' claimed at least organizing the entire set of pixels into dynamic and static partitions, each respective partition having multiple pixels, mapping one or more of the dynamic and the static partitions to one or more of the member-pixels of the subset, respectively and reading the static partitions once and the dynamic partitions multiple times and processing extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions. Further, when Horie is combined with Lee et al. and Vernier, the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention.

For example, Horie simply disclose a luminance calculator for calculating luminance information of a picked up color image based on image data of each of a plurality of color components constituting the color image (see Abstract of Horie). Hence, Horie fails to cure the deficiencies of Lee et al. and Vernier as argued above. Thus, since the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention, this obviousness rejection of claims must be withdrawn.

D. The rejection of claims 21-22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee et al. in view of Vernier in view of Yoneyama and further in view of Horie et al should be withdrawn because claims 21-22 contain features that are not disclosed, taught or suggested by the cited references.

On page 22 of the July 1, 2009 final Office Action, the Examiner rejected claims 21-22.

As argued above, Lee et al. in combination with Vernier do not disclose, teach or suggest the Appellants' claimed at least organizing the entire set of pixels into dynamic and static partitions, each respective partition having multiple pixels, mapping one or more of the dynamic and the static partitions to one or more of the member-pixels of the subset, respectively and reading the static partitions once and the dynamic partitions multiple times and processing extra partition-read requests for creating a series of images corresponding in time to more frequently read partitions. Further, when Yoneyama and Horie are combined with Lee et al. and Vernier, the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention.

As argued above, Yoneyama merely disclose V_A , V_B and V_C of picture elements A, B and C, while Horie simply disclose a luminance calculator for calculating luminance information of a picked up color image based on image data of each of a plurality of color components constituting the color image. Clearly, Yoneyama and Horie do not add any features that are missing from Lee et al. and Vernier. Thus, Yoneyama and Horie fail to cure the deficiencies of Lee et al. and Vernier as argued above. Thus, because the combined cited references still do not disclose, teach or suggest all of the features of the Appellants' claimed invention, this obviousness rejection of claims must be withdrawn.

Further, because the dependent claims depend from the above-argued respective independent claims, and they contain additional limitations that are patentably distinguishable over the cited references, these claims are also considered to be patentable (MPEP § 2143.03).

E. Conclusion

Accordingly, since the cited references fail to disclose, suggest or provide motivation for the Appellant's claimed invention, a prima facie case of obviousness does not exist (MPEP 2143), and thus, the rejections should be withdrawn. In view of the foregoing, reversal of the rejections of the claims is respectfully requested. As such, for any one of the above-stated reasons, the rejections of the respective claims should be reversed. In combination, the above-stated reasons overwhelmingly support such reversal. Thus, the Appellant respectfully requests that the Board reverse the rejections of the claims.

Respectfully submitted,

Date: December 1, 2009

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VIII. CLAIMS APPENDIX

1 1. A method of selectively reading less than all information available at an
2 output of an image sensor for which member-pixels of a subset of an entire set of
3 pixels are individually addressable, the method comprising:
4 sampling information, at the output of the image sensor, representing a
5 targeted member-pixel of the subset without having to read information
6 representing the entire set of pixels;
7 selectively reading information, at the output of the image sensor,
8 representing at least one or more, but fewer than all member pixels, of the entire
9 set based upon the sampling information without having to read information
10 representing all pixels on the image sensor, wherein each pixel can be
11 individually read, independently of other pixels;
12 accessing a first set of sampling photo-sensing pixels of the image sensor
13 and accessing a second set of non-sampling pixels of the image sensor, wherein
14 the first and the second set of pixels have different physical circuitry addressing
15 and control lines going to them, respectively;
16 organizing the entire set of pixels into dynamic and static partitions, each
17 partition having multiple pixels;
18 mapping one or more of the partitions to one or more of the member-pixels
19 of the subset, respectively; and
20 reading the static partitions once and the dynamic partitions multiple times
21 and processing extra partition-read requests for creating a series of images
22 corresponding in time to more frequently read partitions.

1 2. The method of claim 1, further comprising:
2 reading information, at the output of the image sensor, representing
3 member-pixels of the entire set that are located within a predetermined area
4 adjacent to or surrounding the targeted member-pixel of the subset.

1 3. The method of claim 2, further comprising:
2 reading information, at the output of the image sensor, representing all
3 member-pixels of the subset so as to generate a plurality of samples;

4 handling the samples in a manner that preserves a relationship between
5 each sample and corresponding member-pixel of the subset; and
6 reading information, at the output of the image sensor, representing one or
7 more of the partitions mapped to the member-pixels of the subset but not all of
8 the partitions based upon the plurality of samples.

1 4. The method of claim 1, further comprising:
2 determining if the sampling information exceeds a reference value; and
3 reading information, at the output of the image sensor, representing the
4 one or more but fewer than all member-pixels of the entire set if the sampling
5 information exceeds the reference value.

1 5. The method of claim 4, wherein the reference value represents one of
2 a user-determined threshold or a saturation threshold for the targeted member-
3 pixel of the subset.

1 6. The method of claim 4, further comprising:
2 reading information, at the output of the image sensor, representing all
3 member-pixels of the subset so as to generate a plurality of samples, each
4 member-pixel of the subset having a corresponding reference value, respectively;
5 applying the determining step to each of the samples; and
6 reading information, at the output of the image sensor, representing the
7 one or more but fewer than all member-pixels of the entire set located within a
8 predetermined area adjacent to or surrounding member-pixels for which the
9 corresponding sample exceeds the respective reference value.

1 7. The method of claim 4, wherein:
2 the sampling information is the current sampling information and the
3 reference value is a first reference value; and
4 the method further comprises:
5 taking the difference between the current sampling information and the
6 first reference value; and

7 reading, at the output of the image sensor, information representing the
8 one or more but fewer than all member-pixels of the entire set if the difference
9 exceeds a second reference value.

1 8. The method of claim 7, wherein the first reference value is the
2 previous sampling information.

1 9. The method of claim 7, further comprising:
2 setting the first reference value to be equal to the current sampling
3 information if the difference exceeds the second reference value.

1 10. The method of claim 1, further comprising:
2 measuring an elapsed time; and
3 reading information, at the output of the image sensor, representing all
4 member-pixels of the subset if the elapsed time exceeds a predetermined
5 amount.

1 11. The method of claim 10, further comprising:
2 measuring another instance of elapsed time upon reading information, at
3 the output of the image sensor, representing all member-pixels of the subset.

1 12. The method of claim 1, wherein the image sensor is one of a CCD
2 image sensor for which the subset is smaller than the entire set and a CMOS
3 image sensor for which the subset is the same as the entire set.

1 13. A method of selectively reading data available at an output of an
2 image sensor, the method comprising:
3 reading less than all data available at the output of the image sensor for
4 which selected ones but not all of the entire set of pixels are individually
5 addressable, wherein each pixel can be individually read, independently of other
6 pixels;
7 accessing a first set of sampling photo-sensing pixels of the image sensor
8 and accessing a second set of non-sampling pixels of the image sensor, wherein

9 the first and the second set of pixels have different physical circuitry addressing
10 and control lines going to them, respectively;
11 organizing the entire set of pixels into dynamic and static partitions, each
12 respective partition having multiple pixels;
13 mapping one or more of the dynamic and the static partitions one or more
14 of the member-pixels of the subset, respectively; and
15 reading the static partitions once and the dynamic partitions multiple times
16 and processing extra partition-read requests for creating a series of images
17 corresponding in time to more frequently read partitions.

1 14. The method of claim 13, further comprising:
2 organizing the image sensor into a matrix of partitions, each partition
3 including a member-pixel of the subset referred to as a sampling pixel;
4 sampling data, at the output of the image sensor, representing a sampling
5 pixel without having to read information representing the other pixels in the
6 corresponding partition; and
7 selectively reading data, at the output of the image sensor, representing at
8 least the entire corresponding partition but fewer than all of the partitions
9 depending upon the sampled-data without having to read all of the pixels on the
10 image sensor.

1 15. The method of claim 14, further comprising:
2 reading data, at the output of the image sensor, representing partitions
3 located within a predetermined area adjacent to or surrounding the sampling
4 pixel.

1 16. The method of claim 14, further comprising:
2 determining if the sampled-data exceeds a reference value; and
3 reading data, at the output of the image sensor, representing the one or
4 more but fewer than all member-pixels of the entire set if the sampled-data
5 exceeds the reference value.

1 17. The method of claim 16, wherein the reference value represents a
2 saturation threshold for the targeted member-pixel of the subset.

1 18. The method of claim 16, wherein:
2 the sampled data is the currently sampled data and the reference value is
3 a first reference value; and
4 the method further comprises
5 taking the difference between the currently sampled data and the
6 first reference value, and
7 reading, at the output of the image sensor, information representing
8 the one or more but fewer than all member-pixels of the entire set if the difference
9 exceeds a second reference value.

1 19. The method of claim 18, wherein the first reference value is the
2 previously sampled data.

1 20. The method of claim 18, further comprising:
2 setting the first reference value to be equal to the currently sampled data if
3 the difference exceeds the second reference value.

1 21. The method of claim 14, further comprising:
2 measuring an elapsed time; and
3 reading data, at the output of the image sensor, representing all member-
4 pixels of the entire set of pixels if the elapsed time exceeds a predetermined
5 amount.

1 22. The method of claim 21, further comprising:
2 measuring another instance of elapsed time upon reading information, at
3 the output of the image sensor, representing the entire set of pixels.

1 23. The method of claim 14, wherein the image sensor is one of a CCD
2 image sensor for which the subset is smaller than the entire set and a CMOS
3 image sensor for which the subset is the same as the entire set.

1 24. A digital camera comprising:
2 a pixel-differentiated image sensor for which member-pixels of a subset of
3 the entire set of pixels are individually addressable, the image sensor being
4 controllable to read less than all of the pixels without having to read all of the
5 pixels;
6 a processor operable to
7 obtain sampling information from a targeted member-pixel of the
8 subset without having to read information from the entire set of pixels; and
9 selectively obtain information from another one or more but fewer
10 than all member pixels of the entire set based upon the sampling information
11 without having to read all of the pixels on the image sensor, wherein each pixel
12 can be individually read, independently of other pixels;
13 organize the entire set of pixels into dynamic and static partitions,
14 each partition having multiple pixels;
15 map one or more of the partitions one or more of the member-pixels
16 of the subset, respectively; and
17 read the static partitions once and the dynamic partitions multiple
18 times and process extra partition-read requests for creating a series of images
19 corresponding in time to more frequently read partitions;
20 a first set of sampling photo-sensing pixels of the image sensor; and
21 a second set of non-sampling pixels of the image sensor;
22 wherein the first and the second set of pixels have different physical
23 circuitry addressing and control lines going to them, respectively.

1 25. The digital camera of claim 24, wherein the processor is operable to
2 selectively obtain information from member-pixels of the entire set that are
3 located within a predetermined area adjacent to or surrounding the targeted
4 member-pixel of the subset.

1 26. The digital camera of claim 25, wherein
2 the processor is operable to read information from all member-pixels of the
3 subset so as to generate a plurality of samples;
4 the processor further being operable to
5 handle the samples in a manner that preserves a relationship between
6 each sample and corresponding member-pixel of the subset, and
7 read information from one or more of the partitions mapped to the
8 member-pixels of the subset but not all of the partitions based upon the plurality
9 of samples.

1 27. A digital camera comprising:
2 a pixel-differentiated image sensor for which selected ones of the entire
3 set of pixels are individually addressable, the image sensor being organized into
4 a matrix of partitions, each partition including a member-pixel of the subset
5 referred to as a sampling pixel; and
6 a processor operable to
7 obtain sampling data from a sampling pixel without having to obtain
8 information from the other pixels in the corresponding partition, and
9 selectively obtain data from at least the entire corresponding
10 partition but fewer than all of the partitions depending upon the sampled-data
11 without having to obtain information from all of the pixels on the image sensor,
12 wherein each pixel can be individually read, independently of other pixels;
13 access a first set of sampling photo-sensing pixels of the image
14 sensor and access a second set of non-sampling pixels of the image sensor,
15 wherein the first and the second set of pixels have different physical circuitry
16 addressing and control lines going to them, respectively; and
17 organize the entire set of pixels into dynamic and static partitions,
18 each partition having multiple pixels;
19 map one or more of the partitions one or more of the member-pixels
20 of the subset, respectively; and

21 read the static partitions once and the dynamic partitions multiple
22 times and process extra partition-read requests for creating a series of images
23 corresponding in time to more frequently read partitions.

1 28. The digital camera of claim 27, wherein the processor is operable to
2 selectively obtain data from partitions located within a predetermined area
3 adjacent to or surrounding the sampling pixel.

IX. EVIDENCE APPENDIX

Copies of evidence are not enclosed.

X. RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any related proceedings.